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10/571,043	10/27/2006	David Lill	101458012US1	1718		
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PERKINS COIE LLP PATENT-SEA P.O. BOX 1247 SEATTLE, WA 98111-1247				MESFIN, YEMANE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/571,043	LILL ET AL.	
	Examiner	Art Unit	
	Yemane Mesfin	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 03 March 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-35 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 03 March 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/03/2006, 07/19/2006, 02/14/2007, 05/29/2007, 04/09/2008, 05/15/2008 and 11/17/2008.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application

6) Other: _____.

DETAILED ACTION

1. This application has been examined. Claims 1-35 are pending.

Information Disclosure Statement

2. The Examiner has considered the references listed on the Information Disclosure Statement submitted on 03/03/2006, 07/19/2006, 02/14/2007, 05/29/2007, 04/09/2008, 05/15/2008 and 11/17/2008 (see attached PTO-1449).

Drawings

3. The Examiner contends that the drawings submitted on 03/03/2006 are acceptable for examination proceedings.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 21-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 21 calls for a “computer readable medium”. As evidenced by applicant’s disclosure (see for instance further limiting claim 27 “wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents”), the computer readable medium is not limited to a statutory subject matter. Thus, claims are rejected as being directed a non statutory subject matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11, 14-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Heteren (US 6,885,309) hereinafter “Van” in view of Morrison (US 2003/0235194).

As per claims 1 and 4: (exemplary claim 1), Van disclosed a data collection and processing system for use With meter devices that measure a utility, the system comprising: multiple data collection devices associated with an automatic meter reading system, wherein each of the multiple data collection devices is coupled to multiple meter-reading modules configured for transmitting collected meter-reading information to the data collection devices, and wherein each of the data collection devices generates a message having a payload (Abstract, and col. 6, lines 41-46), the message comprising: header information identifying a source of the message (col. 6, lines 41-46, IP packet based data collection of automated meter reading, which implicitly includes the conventional data fields such as the header and payload portions of the packet data structure); and a first packet having a first type of meter data and a second packet having a second type of meter data distinct from the first type of meter data, wherein the first packet and the second packet comprise at least a portion of the payload (col. 5, lines 1-15, plurality of data reading meters monitoring different types of consumptions of gas water... and fig. 1 showing packetized data collection and communication of meter data. Note that the packet carried over a packet based network implicitly include the header and payload portion in the packet data structure);

and a head-end subsystem comprising: an interlace component for receiving the message from the multiple data collection devices, wherein the message is received over a communication link (Fig. 1, and col. 5, lines 19-43; data processing center # 60, receiving plurality of collected readings collected via plurality of meter readers #10-17 over a communication network);

Van substantially disclosed the invention as recited. Van generally taught data collection of automated meter reading of plurality of services (gas, water and other services) over the communication network and processing the collected data via the data processing center (see typical Fig. 1). However, Van failed to teach: “a first specialized packet processor configured for processing only the first type of data; a second specialized packet processor configured for processing only the second type of data; and a message organizer component effectively coupled to the first packet processor and the second packet processor, wherein the message organizer is configured for delegating the first packet to the first specialized packet processor and delegating the second packet to the second specialized packet processor.

However, as evidenced in these arts, Morrison disclosed a first specialized packet processor configured for processing only the first type of data (Fig. 1 # Processing engine # 14a and ¶07-8, ¶¶17-18); a second specialized packet processor configured for processing only the second type of data (Fig. 1 # Processing engine # 14b and ¶18); and a message organizer component effectively coupled to the first packet processor and the second packet processor, wherein the message organizer is configured for delegating the first packet to the first specialized packet processor and delegating the second packet to the second specialized packet processor (Fig. 1 # 10, Packet assignment logic and ¶¶17-18 and ¶¶21-24). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Van related to collecting processing meter data with the teachings of Morrison related to packet/data type based

multiprocessing core engines because such modification would “handle different networking protocols and yet does not spend significant amount of processing time selecting the appropriate codes for execution” (Morrison, ¶06).

As per claim 2, note that Van disclosed a wireless network configured for communication between the multiple meter-reading modules and the multiple data collection devices (Fig. 1, # 54 wirelesses IP for data collection).

As per claim 3, the already combined teachings of Van and Morrison disclosed, wherein the first packet and the second packet include header information having a signature identifying the type of data, and wherein the head-end subsystem further comprises a data store containing signature keys that are checked against the packet signatures (Morrison, ¶21-24, ¶32).

As per claim 5, the already combined teachings of Van and Morrison disclosed, wherein the first packet processor and the second packet processor process data asynchronously (Van col. 8, lines 59-67 ...asynchronous packets are not sent at regular intervals).

As per claim 6, the combined teachings of Van and Morrison disclosed a message organizer component configured for validating a structure of the received message (Morrison, Fig. 1 # 10, Packet assignment logic) and for delegating the first packet to the first packet processor and the second packet to the second packet processor based on a signature key of the first packet and a signature key of the second packet (Morrison, ¶21-24, and ¶32); and a data store for use by the message organizer component in delegating the first packet to the first packet processor and delegating the second packet to the second packet processor, wherein the data store has a first key corresponding to data of the first type and a second key corresponding to data of the second type (Morrison, ¶21-24, and ¶32).

As per claim 7, the already combined teachings of Van and Morrison substantially disclosed

the invention as recited. However, were silent about the details of the object oriented programming framework utilized being an Active Server Page (ASP) running on an Internet Information Service (IIS) component, and wherein the Active Server Page (ASP) communicates with the message organizer. However, the use of ASP running on IIS was commonly known and readily available tool at the time the invention was made. Furthermore, the already combined teachings are computer based system, which inherently utilize one or more forms of programming framework which may be any one of the readily available platforms (such as coldfusion ®/™, ASP ®/™, JSP ®/™ and the like), which is arbitrary as the actual scope of the invention is not affected by the use of these arbitrary object oriented development tools. Thus, it would have been obvious to make use of ASP in implementing the already combined teachings, because ASP facilitates development of dynamic web based services/systems.

As per claim 8, the already combined teachings of Van and Morrison disclosed, wherein the message organizer component is further configured for data decompression (Morrison, Fig. 1 # 10, Packet assignment logic receiving data packet). However, the already combined teachings are silent about the function of data decompression. It is respectfully submitted that it was vastly known in the art to compress and decompress data and would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the already combined teachings with the feature of data compression and decompression in order optimize communication bandwidth.

As per claim 9, the already combined teachings of Van and Morrison disclosed, wherein the message organizer component, the first packet processor, and the second packet processor are queued components (Morrison, Fig. 5, # 520a and # 520b).

As per claim 10, the already combined teachings of Van and Morrison disclosed an archive component configured for archiving data in the received messages (Morrison, Fig. 5, # 510 packet

memory for storing messages received via receiver unit 11a).

As per claim 11, the already combined teachings of Van and Morrison disclosed, wherein the first packet processor and the second packet processor share the same interface (Morrison, ¶¶21-24 and Fig. 1, shared interface among the plurality of processors).

As per claim 14, already combined teachings of Van and Morrison disclosed, wherein the first type of data is interval data collected from one or more utility Meters employing solid state demand techniques (col. 7, lines 22-44).

As per claim 15, already combined teachings of Van and Morrison disclosed, wherein the first type of data is interval data collected from one or more water utility meters monitoring water consumption (Van col. 1, lines 21-31 and col. 8, lines 59-67).

As per claim 16, already combined teachings of Van and Morrison disclosed, wherein the message is a recursive data structure having an additional message within the message (Van. col. 9, lines 31-34).

As per claim 17, already combined teachings of Van and Morrison disclosed, the invention as recited. However, did not explicitly teach encrypting the message. However, to encrypt a message was commonly known and widely implemented in the art and would have been obvious to one of ordinary skill in the art to utilize data encryption on the already combined teachings of Van and Morrison with a motivation to secure the communication.

As per claim 18, already combined teachings of Van and Morrison disclosed, wherein the packet header includes signature information that identifies the type of data in each packet (Morrison, ¶21-24, ¶32, incoming packets are examined for their types, which implies extracting the header information of the packet).

As per claim 19, already combined teachings of Van and Morrison disclosed, a message organizer component configured for validating a structure of the received message and for delegating the first packet to the first packet processor and the second packet to the second packet processor based on a signature key of the first packet and a signature key of the second packet (Morrison, ¶21-24, ¶32).

As per claim 20, already combined teachings of Van and Morrison disclosed, wherein the received message is encapsulated in a standard protocol wrapper (Van, Fig. 1, meter data collected and carried within an IP packet over the IP network).

As per claim 31, Van disclosed a method for processing messages received from multiple data collection devices used in an automatic meter reading system, the method comprising (Fig. 1, plurality of automated meter readers collecting consumption data and communicating the collected data to a centralized processing station # 60);

receiving a message from a data collection device configured for collecting utility consumption data for use in the automatic meter reading system (Fig. 1), the message comprising: a first packet having a first type of data and a first packet header containing a first identifier, wherein the first type of data includes data recorded at a utility meter (col. 1, lines 1-12); (Fig. 4A # 110-112; packet type analyzed; and col. 3, lines 1-40 and col. 4, line 63 through col. 5, line 8 and col. 6, lines 25-49; different types of readings are collected packetized and communicated to the central data processing center, where the collected data is processed)

and a second packet having a second type of data and a second packet header containing a second identifier, wherein the second type of data is distinct from the first type of data (col. 5, lines 1-27 and col. 6, lines 25-34; the central processing unit receiving different packet based meter readings of different types of service consumption. In making that happen, it is inherent that the

data packets must be uniquely identified in order to be accurately processed generate appropriate readings of the differentiated meter data readings);

validating the message, wherein the validating includes looking-up the first and second identifiers in a data base table (col. 5, lines 44-51).

Van substantially disclosed the invention as recited. However, failed to teach delegating the first packet to a first processor configured for processing the first type of data and delegating the second packet to a second processor configured for processing the second type of data, wherein the delegating is based, at least in part, on the signature of the packet. However, as evidenced by the teachings of Morrison, delegating the first packet to a first processor configured for processing the first type of data and delegating the second packet to a second processor configured for processing the second type of data, wherein the delegating is based, at least in part, on the signature of the packet was known in the art at the time the invention was made (see Morrison, ¶¶17-18; ¶¶21-24; ¶32 and Fig. 1, Plurality of processing engines configured to process specific types of packets and a Packet assignment logic # 10 assigning specific types of packets to appropriate processors and). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Van related to collecting processing meter data with the teachings of Morrison related to packet/data type based multiprocessing core engines because such modification would “handle different networking protocols and yet does not spend significant amount of processing time selecting the appropriate codes for execution” (Morrison, ¶06).

As per claim 32, the already combined teachings of Van and Morrison disclosed modifying the system to handle messages containing a third type of data by adding a third packet processor for processing the third type of data (Morrison, Fig. 1, Processing engines 14a for packet type A, 14b for packet type B, 14c for Packet type C....14n for packet type N).

As per claim 33, the already combined teachings of Van and Morrison disclosed, wherein the multiple data collection devices include a first data collection device running on a first software version and a second data collection device running on a second software version, and wherein the first software version includes a first set of data types including the first type of data and the second type of data, and wherein the second software version includes a second set of data types including a third type of data and a fourth type of data (Morrison, ¶21-24 and ¶¶31-33).

As per claim 34, the already combined teachings of Van and Morrison disclosed, wherein the received message is compressed upon receipt and wherein the validating includes decompressing the received message (Morrison, Fig. 1 # 10, Packet assignment logic receiving data packet and ¶21-24; ¶¶31-33). The combined teachings are silent about the function of data compression and decompression. However, it is respectfully submitted that it was vastly known in the art to compress and decompress data and would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the already combined teachings with the feature of data compression and decompression in order optimize communication bandwidth.

As per claim 35, Van disclosed a system for processing messages received from multiple data collection devices in an automatic meter reading system, the system comprising: means for receiving a message from a data collection device in the automatic meter reading system (Fig. 1, plurality of automated meter readers collecting consumption data and communicating the collected data to a centralized processing station # 60), the message comprising:

a first packet having a first type of data and a first packet header containing a first signature (Fig. 4A # 110-112; packet type analyzed; and col. 3, lines 1-40 and col. 4, line 63 through col. 5, line 8 and col. 6, lines 25-49; different types of readings (gas, water and other service consumption readings) are collected packetized and communicated to the central data processing center, where

the collected data is processed accordingly); and a second packet having a second type of data and a second packet header containing a second signature, wherein the second type of data is distinct from the first type of data (col. 5, lines 1-27 and col. 6, lines 25-34; the central processing unit receiving different packet based meter readings of different types of service consumption. In making that happen, it is inherent that the data packets must be uniquely identified in order to be accurately processed generate appropriate readings of the differentiated meter data readings); means for validating the message, wherein the validating includes looking up the first and second signatures in a data base table (col. 5, lines 44-51);

Van substantially disclosed the invention as recited. However, failed to teach means for delegating the first packet to a first processor configured for processing the first type of data and delegating the second packet to a second processor configured for processing the second type of data, wherein the delegating is based, at least in part, on the signature of the packet. However, as evidenced by the teachings of Morrison, delegating the first packet to a first processor configured for processing the first type of data and delegating the second packet to a second processor configured for processing the second type of data, wherein the delegating is based, at least in part, on the signature of the packet was known in the art at the time the invention was made (see Morrison, ¶¶17-18; ¶¶21-24; ¶32 and Fig. 1, Plurality of processing engines configured to process specific types of packets and a Packet assignment logic # 10 assigning specific types of packets to appropriate processors and). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Van related to collecting processing meter data with the teachings of Morrison related to packet/data type based multiprocessing core engines because such modification would “handle different networking

protocols and yet does not spend significant amount of processing time selecting the appropriate codes for execution" (Morrison, ¶06).

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the already combined teachings of Van and Morrison as applied above and further in view of Nap et al., (US 6,246,677).

As per claims 12 and 13: the already combined teachings of Van and Morrison disclosed the invention was recited. However, were silent about alarm data and/or tamper data collected from one or more utility meters. However, as evidenced by the teachings of Nap et al., collecting alarm data and/or tamper data from plurality of utility meters was known in the art at the time the invention was made (Nap et al., col. 2, line 52 through col. 3, line 6 and col. 4, line 2-9). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to take the teachings of Nap et al., related to collection of alarm and tamper data of utility meters and have modified the already combined teachings of Van and Morrison in order to monitor and properly report working condition of the utility meter reading units (see Nap, col. 4, line 8-9) and further to provide remote virtual control of the readers (see Nap, col. 6, lines 41-52).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 21-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Heteren (US 6,885,309).

As per claims 21and 29, Van disclosed (exemplary claim 21) a computer-readable medium (col. 10, lines 50-51) containing a data structure configured for transmission to a data processor component in an automatic meter reading system, wherein the message includes payload information collected from a data collection device configured for recording consumption data associated with at least one metered device that is monitored by the automatic meter reading system (Fig. 1, plurality of automated meter readers collecting consumption data and communicating the collected data packetized and communicated to a centralized processing station # 60); the message comprising:

header information, wherein the header information includes a device identifier for identifying the device configured for recording consumption data associated with the at least one metered device that is monitored using the automatic meter reading system and a message identifier for identifying the message (col. 6, lines 41-46, IP packet based data collection of automated meter reading, which implicitly includes the conventional data fields such as the header and payload portions of the packet data structure); and

a first packet containing data of a first type and a second packet containing data of a second type distinct from the first type, wherein the first packet and the second packet comprise at least a portion of a message body for the message, wherein the message body for the message includes data associated with the monitoring of the automatic meter reading system, and wherein the first packet and the second packet each include a header having an identifier identifying the first or second type of data contained in the packet (col. 5, lines 1-27 and col. 6, lines 25-34; the central processing unit receiving different packet based meter readings of different types of service consumption. In making

that happen, it is inherent that the data packets must be uniquely identified in order to be accurately processed, generate appropriate readings of the differentiated meter data readings and services).

As per claim 22, Van disclosed, wherein the first packet and the second packet include data in binary form (col. 5, lines 9-52).

As per claim 23, Van disclosed, wherein the header information includes data in binary form (col. 10, lines 40-67).

As per claim 24, Van disclosed, wherein the message is encapsulated in an HTTP or HTTPS wrapper (col. 1, line 65 and col. 9, lines 1-25).

As per claim 25, Van disclosed, wherein the computer-readable medium is a logical node in a computer network receiving the contents (col. 10, lines 45-55, and Fig. 1 remote data processing node receiving the data collected).

As per claim 26, Van disclosed, wherein the computer-readable medium is a computer-readable disk (col. 10, lines 50-51).

As per claim 27, Van disclosed, wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents (Fig. 1 and col. 5, lines 9-51, collected data transmitted to a central processing unit via a transmission medium).

As per claim 28, Van disclosed, wherein the computer-readable medium is a memory of a computer system (col. 10, lines 50-51).

As per claim 30, Van disclosed, wherein the embedded data collection device is coupled to one or more meter-reading modules (see Fig. 1, # 21-22 connected with plurality of meter reading units), wherein the frames include one or more data records, and wherein each of the data records has a one-to-one correspondence with the one or more meter-reading modules coupled to the data collection device (col. 7, lines 7-52 and col. 11, lines 33-50).

Conclusion

9. The prior art made of record and not relied upon (see form PTO-892) is considered pertinent to applicant's disclosure. These cited references each disclose automated meter data reading and data collection utilizing a TCP/IP based communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yemane Mesfin whose telephone number is (571)272-3927. The examiner can normally be reached on 9:30 AM -7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 572-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yemane Mesfin/
Examiner, Art Unit 2444